

G-023 R6

Facsimile Cover Sheet

# US Army Corps of Engineers South Pacific Division

## Regulatory Program Cubicle

333 Market Street, San Francisco, CA 94105-2195  
FAX: (415) 977-8039/8047 Confirm: (415) 977-8030

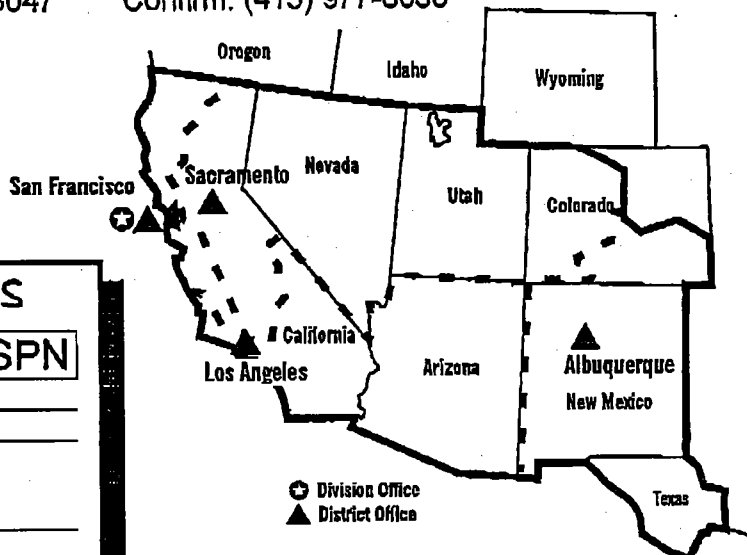
Date: 9 March 2004

From: Wade L. Eakle

To: Stern Spangle, USFWS

SPA	SPK	SPL	SPN
-----	-----	-----	-----

Info: 602-242-2513



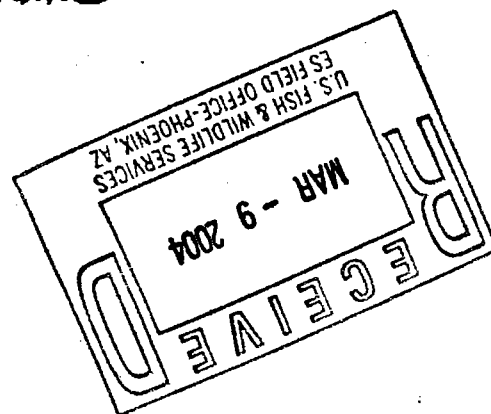
# pages incl cover: 15

**Subject:** Southwestern Willow Flycatcher Comments

Remarks:

Hard copy of comments e-mailed  
yesterday.

WLEakle



**Eakle, Wade L SPD****Subject:** FW: ATTN: Flycatcher NEPA scoping**Importance:** High

-----Original Message-----

From: Eakle, Wade L SPD <Wade.L.Eakle@spd02.usace.army.mil>  
To: 'WIFLcomments@fws.gov' <WIFLcomments@fws.gov>  
CC: 'Greg Beatty@fws.gov' <Greg.Beatty@fws.gov>; 'Debra\_Bills@fws.gov' <Debra\_Bills@fws.gov>; Snow, James T SPD <James.T.Snow@spd02.usace.army.mil>; Turner, Philip R SPD <Philip.R.Turner@spd02.usace.army.mil>; Dykstra, Daniel J SPD <Daniel.J.Dykstra@spd02.usace.army.mil>; Stewart, Mitchell W SPK <Mitchell.W.Stewart@usace.army.mil>  
Sent: Mon Mar 08 19:57:11 2004  
Subject: ATTN: Flycatcher NEPA scoping

Dear Mr. Spangle,

Please reference my e-mail of March 8, 2004.

Attached as a MSWord file are extensive comments from our Sacramento District Environmental Resources Branch, mostly specific to Southwestern Willow Flycatcher issues relevant to the operation and maintenance of Isabella Dam and Lake, on the South Fork Kern River, in Kern County, CA.

The district's comments also include a comprehensive bibliography that should prove useful for your staff and 3rd-party NEPA contractors.

I'll fax the attachment to your office tomorrow.

Respectfully,

Wade L. Eakle  
U.S. Army Corps of Engineers  
South Pacific Division  
333 Market Street  
San Francisco, CA 94105

**Comments on the  
Scope of the Proposed Designation of Critical Habitat  
for the Southwestern Willow Flycatcher**

**U.S. Army Corps of Engineers, Sacramento District  
March 8, 2004**

**INTRODUCTION**

The following comments and issues for consideration are provided in response to the "Notice of Scoping Meetings and Intent to Prepare an Environmental Assessment for the Proposed Designation of Critical Habitat for the Southwestern Willow Flycatcher" (flycatcher) published in the *Federal Register*, Volume 69, Number 13, January 21, 2004. We appreciate the opportunity to provide these comments.

The U.S. Army Corps of Engineers' (Corps) effort to conserve the flycatcher and the riparian habitats along the South Fork Kern River is the result of extensive consultation under Section 7 of the Endangered Species Act between the Corps and the U.S. Fish and Wildlife Service (Service). Throughout this consultation process, the Corps has produced and submitted to the Service numerous reports addressing the potential effects of long-term operation and management of Isabella Dam and Lake in Kern County, California (Appendix 1). The important findings and conclusions derived from these studies could have important implications in preparation of the draft environmental assessment (EA) and the proposed critical habitat designation for the flycatcher.

A summary of these findings and conclusions are summarized in our comments and issues for consideration below. These comments and pertinent issues are presented not to open an arena for disagreement, but provided to share technical information ensuring that the draft EA and proposed critical habitat designation are based on the most current scientific and commercial data available with regard to flycatchers and their riparian habitats along the South Fork Kern River. The Corps ask that the Service place serious consideration to these comments and other information when preparing the draft EA and proposed critical habitat designation for the flycatcher.

**MAJOR ISSUES AND COMMENTS**

1. **Most Current Scientific and Commercial Data Available.** The Service has determined (Service 2004) that: "The Southwestern Willow Flycatcher Recovery Team's efforts and the adapted final Recovery Plan represent a treatment of the best, most current biological information and a projected plan for the recovery of the southwestern willow flycatcher." The Service has also determined (Service 2004) that: "The science, threats, issues, and affected entities identified in the final Recovery Plan, as well as the history of consultations under Section 7 of the Endangered Species Act, will be incorporated into the Service's critical habitat proposal deliberation." Therefore, these Corps comments

CH 15

for consideration in the preparation of the draft environmental assessment (EA) focus primarily on the implications, conclusions, and requirements reached in the final Recovery Plan and biological opinions with regards to the long-term effects of Isabella Dam and Lake operations on the flycatcher and its riparian habitats along the South Fork Kern River, Kern County, California.

**2. Project-Specific Effects to Habitat.** The final Recovery Plan (Service 2002) states: "A recovery plan must establish recovery goals and objectives, and describe site-specific management actions recommended to achieve those goals. . . ." We are concerned that the final Recovery Plan currently makes general statements about the adverse effects of dam and reservoir operations, including Isabella Dam and Lake, instead of recognizing that each project is unique and that overall effects of reservoir operations above and below dams can vary based on the dam's history, topography, watershed size, water years, and operational rules. The Corps understands that the intent of the implementation schedule associated with the final Recovery Plan is to eventually obtain location-specific information to help identify dam and reservoir operations that may potentially adversely affect or benefit the development of optimal riparian habitat for the flycatcher. The Corps encourages the Service to consider and rely on the most current data from biological studies provided with regard to flycatchers and their riparian habitats along the South Fork Kern River (South Fork) when preparing the draft environmental assessment and the proposed critical habitat designation for the flycatcher.

**3. Previous Studies.** In 1996, the Corps initiated ongoing biological studies on the effects of Isabella Dam and Lake on flycatchers and the riparian trees and herbaceous vegetation that provide habitat for them along the South Fork. The Corps' contractor for these studies, Jones & Stokes Inc., has prepared numerous reports since 1996 that were submitted to the Service. Since none of these reports were cited in the draft Recovery Plan, the Corps assumed that the Service did not provide them to the Southwestern Willow Flycatcher Recovery Team.

In April 2001, the Corps provided the Service with comments on the draft Recovery Plan and enclosed copies of the most recent biological studies summarizing the data and conclusions that have been derived from these long-term studies. The Corps requested that these biological studies be reviewed and considered in preparing the final Recovery Plan, especially in reference to the effects of Isabella Dam and Lake operations on flycatchers and their riparian habitats. Although Appendix O of the final Recovery Plan indicated that these studies were reviewed by the Technical Team and included in the list of literature used to formulate the final Recovery Plan, none of these studies were listed in the literature cited section. Based on the content in the final Recovery Plan, it is also apparent that the data produced from these biological studies were not considered in the formulation of the flycatcher recovery plan. The Corps is resubmitting the latest biological studies to the Service, and we again request that these summary documents be reviewed and included in the development of draft EA as part of this current NEPA process.

4. **Beneficial Inundation Effects to Habitat.** The final Recovery Plan implication that periodic inundation by Isabella Lake has adversely affected riparian habitats along the South Fork Kern River is not supported by site-specific data or references in the final Recovery Plan. Jones & Stokes has been studying the effects of inundation on riparian vegetation at Isabella Lake and the South Fork Wildlife Area (SFWA) since late 1996. These studies continue to demonstrate that the Corps' long-term operations of the reservoir have been mostly beneficial to flycatcher habitats at the South Fork Wildlife Area (Jones & Stokes 2000, 2001a, 2001b, 2003b). The documented, short-term adverse effects of Isabella Dam and Lake operations on the riparian habitat include the mortality and/or temporary leaf loss of some riparian trees. The beneficial effects of inundation include increased growth and vigor of most riparian trees at the SFWA (especially in the historical core flycatcher nesting areas) and the establishment of willow seedlings and new riparian habitats, as compared to dry years when the area is not inundated. RV 6

In 1996-1997, Jones & Stokes mapped riparian vegetation and quantified post-inundation tree mortality in the SFWA. Tree mortality was found to be negatively correlated with rooting elevation. The Service used this information in the June 2000 Biological Opinion to determine the "...chronic and direct mortality..." effects of inundation to riparian habitat in the SFWA." However, field observations in 2002 showed that a considerable proportion of the riparian trees previously considered dead have recovered and resprouted partial canopies since 1998. Of 390 acres of black willow habitat mapped below 2,590 feet elevation, 298 acres (76 percent) remained in 2002. Tree mortality below 2,580 feet elevation during the last inundation events has been compensated for by extensive regeneration of black willow, resulting in a 231 percent net increase of riparian vegetation in the area. A singing male Least Bell's vireo was observed there in June 2002 (Jones & Stokes 2002). At higher inundation levels, there appears to be a net decrease in black willow riparian habitat seedling regeneration (Jones & Stokes 2003).

In addition, the physiological studies found that willows experiencing up to 50 days of partial inundation had increased growth rates as compared to trees that were not inundated (Jones & Stokes 2000). These findings were confirmed by an analysis of the annual growth rings of black willow trees, which indicated that inundated trees rooted at an elevation of 2,575 feet to 2,600 feet showed increased growth rates for most years since 1995, as compared to black willow trees rooted above the inundation zone of Isabella Lake. Trees with at least 300 days of partial inundation had the highest growth rates. Analysis of black willow tree rings also demonstrated that their seedlings only become established following wet years when flooding occurs (Jones & Stokes 2000, 2001a, 2001b, 2003b). Herbaceous vegetation, including perennial nettles (*Urtica dioica*), that were mapped during 1996 through 1998 survived inundation and resprouted above-ground, flowering stems during February through April of the years following inundation (Jones & Stokes 2001a).

The regeneration of riparian vegetation is a dynamic process, and much change may be observed from year to year, especially riparian forests associated with flood plains. The same is found of the SFWA riparian vegetation that established after the

1995-1998 inundation. Such regeneration clearly has important implications for species associated with one or more riparian seral stages. Without periodic inundation to enhance the growth of mature black willow trees and to establish new willow seedlings, the existing forest will become increasingly dominated by decadent riparian trees, adversely affecting the structural diversity and wildlife value of the SFWA riparian forest. For these reasons, periodic inundation of the riparian forests at the SFWA is necessary for maintaining the long-term health of this ecosystem for flycatchers and other neotropical migrants. 2v6

**5. Habitat Not a Limiting Factor.** The Corps has agreed to protect 1,100 acres of potential willow flycatcher habitat as required under the Incidental Take Statement for continued routine operations of Isabella Lake and Dam. However, we would like to point out that while this measure will more than minimize the effects of any incidental taking of flycatchers or protected habitat caused by routine reservoir operations, it is not certain that the protection of 1,100 acres will ensure an increase in the size of the flycatcher nesting population along the South Fork because the availability of suitable nesting and foraging habitat are not currently limiting factors for this population.

Continuing studies conducted by the Corps over the past 7 years indicate that much of the suitable riparian habitats both within and outside the inundation zone of the SFWA are unoccupied by flycatchers (Jones & Stokes 1998a, 1998b, 1998c, 1999, 2000a, 2000b, 2002, 2003a, 2003b) concluded: "This study indicates that large suitable nesting area are present throughout riparian habitats along the South Fork Kern River (South Fork), but that most of these areas are currently unoccupied by nesting Southwestern Willow Flycatchers. Based on these results and those of other researchers, it appears that availability of suitable nesting habitat is not a factor limiting the size or reproductive success of the Southwestern Willow Flycatcher populations in the Kern River Valley."

Researchers at the Southern Sierra Research Station have reached similar conclusions. Whitfield, et al. (1999, page 265) noted: "Habitat quality and quantity in the study area does not appear to be a limiting factor for this population. Each year, many areas that appear to be suitable habitat are not used. Willow Flycatchers have bred successfully in many of these areas, abandoned them for a year or two, and then returned to the area in subsequent years. Furthermore, there are no apparent changes in the habitat on the Kern River Preserve, but there have been some on the SFWA due to flooding. However, the number of Willow Flycatchers in the SFWA has never been high (average of five pairs for seven years), and an average of two pairs have used the area in the past two years when most of it was flooded."

Overall, the scientific data referred to in the final biological opinions failed to establish that effects actually caused by routine reservoir operations necessitated the imposition of the required conditions for operations of the reservoir water levels. If the goal is to increase the size and reproductive success of the flycatcher, simply protecting more land and planting riparian trees in areas lacking abundant suitable habitat may not achieve the recovery objectives. While it is true that 44 nesting pairs were found in 1989,

and 23 in 1999, the number of young fledged was similar between the 2 years with 29 and 26 young fledged, respectively. Similarly, the decline of the willow flycatcher has not been linear through time, as the number of breeding pairs declined to 27 in 1992, increased to 34 the following year, and then remained at this size the following 2 years. It is also interesting to note that the highest numbers of young fledged by the South Fork population occurred during years when the SFWA was flooded, 1995 (40), 1996 (58), 1997 (37), and 1998 (40), and the lowest observed fledging success occurred in 1990 (20) and 1991 (24) when the surface of Isabella Lake was at 2,560 feet in elevation or lower.

We therefore ask that the draft EA for the proposed designation of critical habitat for the flycatcher provide a clear discussion, with supporting scientific data, of the extent of the current habitat that has been occupied by nesting flycatchers since 1989, and at what population density the Service expects habitat to be limiting for the South Fork flycatcher population. Clearly, multiple factors affect the size of the South Fork's nesting flycatcher population and its overall reproductive success. As reported by Whitfield and Strong (1995), Whitfield and Enos (1996), and Whitfield and Enos (1999), other factors that have been documented to have major effects on the reproductive success of the flycatcher populations along the South Fork and elsewhere across their range include nest predation, nest parasitism by brown-headed cowbirds, and possible habitat destruction and mortality in their winter range and/or migratory stopover sites.

6. **del Nevo Reference.** The discussion of Isabella Lake in the final Recovery Plan cites only one report by the California Subcommittee of the Southwestern Willow Flycatcher Recovery Team (del Nevo et al., 1998) concerning the effects of Isabella Dam and Lake operations on southwestern willow flycatcher nesting habitats along the South Fork Kern River. In general, the Corps had significant concerns regarding the accuracy, analytical techniques, and conclusions of the Subcommittee's final report, and its failure to consider existing data that were provided to them. For example, the Subcommittee report recommended a 1:1 mitigation ratio for all lands between 2,580- and 2,600-foot elevations at the SFWA to compensate for the effects of periodic inundation on riparian habitats. This implied that throughout the SFWA riparian trees and herbaceous vegetation would be permanently lost and unusable to southwestern willow flycatchers. This assumption is demonstrably false based on long-term studies by the Corps (Jones & Stokes 2000a, 2001b,c). Similarly, by recommending the replacement of "lost" habitat with mitigation lands, the Subcommittee assumed that suitable nesting habitat was a limiting factor to the South Fork Kern Population. However, studies published prior and subsequent to the Subcommittee's report concluded that habitat was not a limiting factor for the southwestern willow flycatcher in wet or dry years (Jones & Stokes 2000a, 2001b; Whitfield and Enos 1996; Whitfield, Enos, and Rowe 1999).

PL8

The Corps requests that the Recovery Team consider and analyze all of the existing data concerning the long-term effects of Isabella Dam and Lake operations on southwestern willow flycatchers and their riparian habitats, and to critically assess the findings and conclusions of del Nevo et al. (1998) in the context of existing data provided in the referenced reports.

## LITERATURE CITED

- del Nevo, A.J., S.A. Laymon, J.R. McBride, R.M. Marshall, R.D. Ohmart, and M.K. Sogge. 1998. *California Subcommittee of the Southwestern Willow Flycatcher Recovery Team: an assessment of the status and habitat use of the southwestern willow flycatcher in relation to operation of Isabella Reservoir within the Kern River Valley*. Final Report (6/22/98). Submitted to U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Jones & Stokes Associates. 1998a. *Biological studies in support of Endangered Species Act compliance for routine operations of Isabella Dam and Lake, California. Task 4. Develop a habitat suitability index model for the southwestern willow flycatcher population in the Kern River Valley*. Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Jones & Stokes Associates. 1998b. *Biological studies in support of Endangered Species Act compliance for routine operations of Isabella Dam and Lake, California. Task 5. Evaluate the affects of project operation on flycatcher habitat: Describe vegetation mortality and other impacts resulting from 1997 operations*. Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Jones & Stokes Associates. 1998c. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 7. Evaluate southwestern willow flycatcher demographic and census data: 1997 Census for southwestern willow flycatchers and least Bell's vireos - summary report*. Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Jones & Stokes Associates. 1999. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 4. Conduct 1998 southwestern willow flycatcher and least bell's vireo censuses - summary report*. Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Jones & Stokes Associates. 2000a. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Evaluation of the effects of 1997, 1998, and 1999 Effects of Isabella Dam and Lake operations on riparian vegetation along the South Fork Kern River*. Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.



Jones & Stokes Associates. 2000b. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 6. Final Habitat Suitability Index Model for the southwestern willow flycatcher (Empidonax traillii extimus) along the South Fork Kern River, Kern County, CA.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2000c. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 4 and 7. Conduct 1999 southwestern willow flycatcher and least bell's vireo censuses and prepare a comprehensive summary report.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. 1997 - 2000 southwestern willow flycatcher and least bell's vireo Surveys comprehensive summary report.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001a. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 6. Final habitat suitability index model for the southwestern willow flycatcher along the South Fork Kern River, Kern County, CA.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001b. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 7. Evaluation of the 1997, 1998, and 1999 effects of Isabella Dam and Lake operations on herbaceous vegetation along the South Fork Kern River.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001c. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 8. Evaluation of the effects of Isabella Dam and Lake operations on riparian tree growth along the South Fork Kern River.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2002. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Summary of 1997 - 2001 survey results for southwestern willow flycatcher and least bell's vireo in the Kern River Valley, Kern County, California.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2003a. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Summary of 1997 – 2003 survey results for southwestern willow flycatcher and least bell's vireo in the Kern River Valley, Kern County, California.* Draft report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA. PL 9

Jones & Stokes Associates. 2003b. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Isabella Dam and Lake/South Fork Kern River riparian mapping and tree mortality study.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

U.S. Fish & Wildlife Service. 2000. *Biological opinion for the reinitiation of formal consultation on the Army Corps of Engineers' long-term operation of Isabella Dam and Reservoir, Kern County, CA.* Sacramento, CA.

U.S. Fish and Wildlife Service. 2002. *Southwestern Willow Flycatcher Recovery Plan.* Albuquerque, New Mexico. PL 10

U.S. Fish and Wildlife Service. 2004. *Questions and answers: scoping for southwestern willow flycatcher critical habitat proposal.* Arizona Ecological Services Field Office. Internet address: <http://arizonaes.fws.gov>.

U.S. Fish and Wildlife Service. 2004. *Notice of scoping meetings and intent to prepare an environmental assessment for the proposed designation of critical habitat for the southwestern willow flycatcher.* Federal Register 69(13):2940-2943.

Whitfield, M. J. and C M. Strong. 1995. *A brown-headed cowbird control program and monitoring program for the southwestern willow flycatcher, South Fork Kern River, California.* Prepared for the California Department of Fish and Game, Bird and Mammal Conservation Program, Report 95-4. Sacramento, CA.

Whitfield, M. J. and K. M. Enos. 1996. *A brown-headed cowbird control program and monitoring program for the southwestern willow flycatcher, South Fork Kern River, California.* Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA. PL 11

Whitfield, M. J., K. M. Enos, and S. P. Rowe. 1999. "Is brown-headed cowbird trapping effective for managing populations of the endangered southwestern willow flycatcher?" *Studies in Avian Biology* 18:260-266.

**Attachment 1****Bibliography**

Jones & Stokes Associates. 1998. *Biological studies in support of Endangered Species Act compliance for routine operations of Isabella Dam and Lake, California. Task 3. Document existing and potential southwestern willow flycatcher habitat in the Kern River Valley.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA. PL 9

Jones & Stokes Associates. 1998. *Biological studies in support of Endangered Species Act compliance for routine operations of Isabella Dam and Lake, California. Task 4. Develop a habitat suitability index model for the southwestern willow flycatcher population in the Kern River Valley.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 1998. *Biological studies in support of Endangered Species Act compliance for routine operations of Isabella Dam and Lake, California. Task 5. Evaluate the affects of project operation on flycatcher habitat: Describe vegetation mortality and other impacts resulting from 1997 operations.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 1998. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 7. Evaluate southwestern willow flycatcher demographic and census data: 1997 Census for southwestern willow flycatchers and least Bell's vireos - summary report.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 1998. *Minimize project impacts on the southwestern willow flycatcher: 1997 brown-headed cowbird monitoring - summary report. Task 8.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 1999. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 4. Conduct 1998 southwestern willow flycatcher and least bell's vireo censuses - summary report.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2000. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Evaluation of the effects of 1997, 1998, and 1999 Effects of Isabella Dam and Lake operations on riparian vegetation along the South Fork Kern River.*

Final report prepared for U.S. Army Corps of Engineers, Sacramento District.  
Sacramento, CA.

Jones & Stokes Associates. 2000. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 6. Final Habitat Suitability Index Model for the southwestern willow flycatcher (Empidonax traillii extimus) along the South Fork Kern River, Kern County, CA.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA. PL<sup>9</sup>

Jones & Stokes Associates. 2000. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 4 and 7. Conduct 1999 southwestern willow flycatcher and least bell's vireo censuses and prepare a comprehensive summary report.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2000. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 5 and 7. Summary of 1997 - 1999 Survey Results for brown-headed cowbirds in the Kern River Valley, Kern County, California.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2000. *Final environmental assessment for protection of 1,100 acres upstream of Isabella Dam and Lake.* Prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. 1997 - 2000 southwestern willow flycatcher and least bell's vireo Surveys comprehensive summary report.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 6. Final habitat suitability index model for the southwestern willow flycatcher along the South Fork Kern River, Kern County, CA.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 7. Evaluation of the 1997, 1998, and 1999 effects of Isabella Dam and Lake operations on herbaceous vegetation along the South Fork Kern River.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2001. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 8. Evaluation of the effects of Isabella Dam and Lake operations on riparian tree growth along the South Fork Kern River.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2002. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Summary of 1997 – 2001 survey results for southwestern willow flycatcher and least bell's vireo in the Kern River Valley, Kern County, California.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2002. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 3. Summary of 1997 – 2001 survey results for brown-headed cowbirds in the Kern River Valley, Kern County, California.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2003. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Summary of 1997 – 2002 survey results for southwestern willow flycatcher and least bell's vireo in the Kern River Valley, Kern County, California.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2003. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 3. Summary of 1997 – 2002 survey results for brown-headed cowbirds in the Kern River Valley, Kern County, California.* Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2003. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 2. Summary of 1997 – 2003 survey results for southwestern willow flycatcher and least bell's vireo in the Kern River Valley, Kern County, California.* Draft report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2003. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Task 3. Summary of 1997 – 2003 survey results for Brown-headed Cowbirds in the Kern River Valley, Kern County, California.* Draft report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

Jones & Stokes Associates. 2003. *Biological studies in support of Endangered Species Act compliance for routine operation of Isabella Dam and Reservoir, California. Isabella Dam and Lake/South Fork Kern River riparian mapping and tree mortality study*. Final report prepared for U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.

U.S. Fish & Wildlife Service. 1996. *Formal consultation and conference on the U.S. Army Corps of Engineers 1996 operation and management of Isabella Reservoir*. Sacramento, CA.

U.S. Fish & Wildlife Service. 1996. *Biological Opinion for the reinitiation of formal consultation on the Army Corps of Engineers' long-term operation of Isabella Dam and Reservoir, Kern County, CA*. Sacramento, CA.

U.S. Fish & Wildlife Service. 1997. *Formal consultation and conference on the U.S. Army Corps of Engineers 1997 operation and management of Isabella Reservoir*. Sacramento, CA.

U.S. Fish & Wildlife Service. 1997. *Biological opinion for the reinitiation of formal consultation on the Army Corps of Engineers' long-term operation of Isabella Dam and Reservoir, Kern County, CA*. Sacramento, CA.

U.S. Fish & Wildlife Service. 2000. *Biological opinion for the reinitiation of formal consultation on the Army Corps of Engineers' long-term operation of Isabella Dam and Reservoir, Kern County, CA*. Sacramento, CA.

U.S. Fish and Wildlife Service. 2002. *Southwestern Willow Flycatcher Recovery Plan*. Albuquerque, New Mexico.

U.S. Fish and Wildlife Service. 2004. *Questions and answers: scoping for southwestern willow flycatcher critical habitat proposal*. Arizona Ecological Services Field Office. Internet address: <http://arizonaes.fws.gov>.

U.S. Fish and Wildlife Service. 2004. *Notice of scoping meetings and intent to prepare an environmental assessment for the proposed designation of critical habitat for the southwestern willow flycatcher*. Federal Register 69(13):2940-2943.

Whitfield, M. J. 1994. *A brown-headed cowbird control program and monitoring for the southwestern willow flycatcher, South Fork Kern River, California*. Prepared for the California Department of Fish and Game, Kern River Research Center, Weldon, CA.

Whitfield, M. J. and C M. Strong. 1995. *A brown-headed cowbird control program and monitoring program for the southwestern willow flycatcher, South Fork Kern River, California*. Prepared for the California Department of Fish and Game, Bird and Mammal Conservation Program, Report 95-4. Sacramento, CA.

- Whitfield, M. J. and K. M. Enos. 1996. *A brown-headed cowbird control program and monitoring program for the southwestern willow flycatcher, South Fork Kern River, California*. Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA. PL 10
- Whitfield, M. J., K. M. Enos, and S. P. Rowe. 1997. *Reproductive response of the southwestern willow flycatcher to the removal of brown-headed cowbirds*. Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Whitfield, M. J., K. M. Enos, and S. P. Rowe. 1999. "Is brown-headed cowbird trapping effective for managing populations of the endangered southwestern willow flycatcher?" *Studies in Avian Biology* 18:260-266.
- Whitfield, M. J., and M. K. Sogge. 1999. "Range-wide impacts of brown-headed cowbird parasitism on the southwestern willow flycatcher." *Studies in Avian Biology* 18:182-190.
- Whitfield, M. J. and J. C. Lynn. 2001. *Nest predation of passerines and predator control studies: A review with implications for the southwestern willow flycatcher*. Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Whitfield, M. J. and J. C. Lynn. 2001. *Southwestern willow flycatcher surveys, nest monitoring, and removal of brown-headed cowbirds on the South Fork Kern River in 2000*. Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Whitfield, M. J. 2002. *Southwestern willow flycatcher surveys, nest monitoring, and removal of brown-headed cowbirds on the South Fork Kern River in 2001*. Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Whitfield, M. J. 2003. *Southwestern willow flycatcher monitoring and removal of brown-headed cowbirds on the South Fork Kern River in 2002*. Final report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.
- Whitfield, M. J. 2003. *Southwestern willow flycatcher monitoring and removal of brown-headed cowbirds on the South Fork Kern River in 2003*. Draft report prepared for the U.S. Army Corps of Engineers, Sacramento District. Sacramento, CA.